

➤ American Association of Colleges of Pharmacy, 1426 Prince St., Alexandria, VA 22314. Internet: <http://www.aacp.org>

➤ National Association of Boards of Pharmacy, 700 Busse Highway, Park Ridge, IL 60068. Internet: <http://www.nabp.net>

General information on careers in pharmacy is available from:

➤ National Association of Chain Drug Stores, 413 N. Lee St., P.O. Box 1417-D49, Alexandria, VA 22313-1480. Internet: <http://www.nacds.org>

State licensure requirements are available from each State's Board of Pharmacy.

Information on specific college entrance requirements, curriculums, and financial aid is available from any college of pharmacy.

## Physical Therapists

(O\*NET 29-1123.00)

### Significant Points

- Employment is expected to increase faster than the average, as rapid growth in the number of middle-aged and elderly individuals increases the demand for therapeutic services.
- After graduating from an accredited physical therapist educational program, therapists must pass a licensure exam before they can practice.

### Nature of the Work

Physical therapists (PTs) provide services that help restore function, improve mobility, relieve pain, and prevent or limit permanent physical disabilities of patients suffering from injuries or disease. They restore, maintain, and promote overall fitness and health. Their patients include accident victims and individuals with disabling conditions such as low back pain, arthritis, heart disease, fractures, head injuries, and cerebral palsy.

Therapists examine patients' medical histories, then test and measure their strength, range of motion, balance and coordination, posture, muscle performance, respiration, and motor function. They also determine patients' ability to be independent and reintegrate into the community or workplace after injury or illness. Next, they develop treatment plans describing a treatment strategy, its purpose, and anticipated outcome. Physical therapist assistants, under the direction and supervision of a physical therapist, may be involved in implementing treatment plans with patients. Physical therapist aides perform routine support tasks, as directed by the therapist. (Physical therapist assistants and aides are discussed elsewhere in the *Handbook*.)

Treatment often includes exercise for patients who have been immobilized and lack flexibility, strength, or endurance. They encourage patients to use their own muscles to further increase flexibility and range of motion before finally advancing to other exercises improving strength, balance, coordination, and endurance. Their goal is to improve how an individual functions at work and home.

Physical therapists also use electrical stimulation, hot packs or cold compresses, and ultrasound to relieve pain and reduce swelling. They may use traction or deep-tissue massage to relieve pain. Therapists also teach patients to use assistive and adaptive devices such as crutches, prostheses, and wheelchairs. They also may show patients exercises to do at home to expedite their recovery.

As treatment continues, physical therapists document progress, conduct periodic examinations, and modify treatments when necessary. Such documentation is used to track the patient's progress, and identify areas requiring more or less attention.



*A patient, under the care of a physical therapist, works to regain mobility.*

Physical therapists often consult and practice with a variety of other professionals, such as physicians, dentists, nurses, educators, social workers, occupational therapists, speech-language pathologists, and audiologists.

Some physical therapists treat a wide range of ailments; others specialize in areas such as pediatrics, geriatrics, orthopedics, sports medicine, neurology, and cardiopulmonary physical therapy.

### Working Conditions

Physical therapists practice in hospitals, clinics, and private offices that have specially equipped facilities, or they treat patients in hospital rooms, homes, or schools.

Most full-time physical therapists work a 40-hour week, which may include some evenings and weekends. The job can be physically demanding because therapists often have to stoop, kneel, crouch, lift, and stand for long periods. In addition, physical therapists move heavy equipment and lift patients or help them turn, stand, or walk.

### Employment

Physical therapists held about 132,000 jobs in 2000; about 1 in 4 worked part time. The number of jobs is greater than the number of practicing physical therapists because some physical therapists hold two or more jobs. For example, some may work in a private practice, but also work part time in another health facility.

About two-thirds of physical therapists were employed in either hospitals or offices of physical therapists. Other jobs were in home health agencies, outpatient rehabilitation centers, offices and clinics of physicians, and nursing homes. Some physical therapists are self-employed in private practices. They may provide services to individual patients or contract to provide services in hospitals, rehabilitation centers, nursing homes, home health agencies, adult daycare programs, and schools. They may be in solo practice or be part of a consulting group. Physical therapists also teach in academic institutions and conduct research.

### Training, Other Qualifications, and Advancement

All States require physical therapists to pass a licensure exam before they can practice, after graduating from an accredited physical therapist educational program.

According to the American Physical Therapy Association, there were 199 accredited physical therapist programs in 2001. Of the accredited programs, 165 offered master's degrees, and 33 offered doctoral degrees. By 2002, all physical therapist programs seeking accreditation are required to offer degrees at the master's degree

level and above, in accordance with the Commission on Accreditation in Physical Therapy Education.

Physical therapist programs start with basic science courses such as biology, chemistry, and physics, and then introduce specialized courses such as biomechanics, neuroanatomy, human growth and development, manifestations of disease, examination techniques, and therapeutic procedures. Besides classroom and laboratory instruction, students receive supervised clinical experience. Courses useful when applying to physical therapist educational programs include anatomy, biology, chemistry, social science, mathematics, and physics. Before granting admission, many professional education programs require experience as a volunteer in a physical therapy department of a hospital or clinic.

Physical therapists should have strong interpersonal skills to successfully educate patients about their physical therapy treatments. They should also be compassionate and possess a desire to help patients. Similar traits also are needed to interact with the patient's family.

Physical therapists are expected to continue professional development by participating in continuing education courses and workshops. A number of States require continuing education to maintain licensure.

**Job Outlook**

Employment of physical therapists is expected to grow faster than the average for all occupations through 2010. Federal legislation imposing limits on reimbursement for therapy services may adversely affect the job market for physical therapists in the near term. However, over the long run, the demand for physical therapists should continue to rise as a result of growth in the number of individuals with disabilities or limited function requiring therapy services. The rapidly growing elderly population is particularly vulnerable to chronic and debilitating conditions that require therapeutic services. Also, the baby-boom generation is entering the prime age for heart attacks and strokes, increasing the demand for cardiac and physical rehabilitation. More young people will need physical therapy as technological advances save the lives of a larger proportion of newborns with severe birth defects.

Future medical developments should also permit a higher percentage of trauma victims to survive, creating additional demand for rehabilitative care. Growth also may result from advances in medical technology which permit treatment of more disabling conditions.

Widespread interest in health promotion also should increase demand for physical therapy services. A growing number of employers are using physical therapists to evaluate worksites, develop exercise programs, and teach safe work habits to employees in the hope of reducing injuries.

**Earnings**

Median annual earnings of physical therapists were \$54,810 in 2000. The middle 50 percent earned between \$46,660 and \$67,390. The lowest 10 percent earned less than \$38,510, and the highest 10 percent earned more than \$83,370. Median annual earnings in the industries employing the largest numbers of physical therapists in 2000 were as follows:

Offices and clinics of medical doctors .....	\$58,390
Home health care services .....	57,830
Offices of other health practitioners .....	55,830
Nursing and personal care facilities .....	54,740
Hospitals .....	54,430

**Related Occupations**

Physical therapists rehabilitate persons with physical disabilities. Others who work in the rehabilitation field include occupational

therapists, recreational therapists, rehabilitation counselors, respiratory therapists, and speech-language pathologists and audiologists.

**Sources of Additional Information**

Additional information on a career as a physical therapist and a list of accredited educational programs in physical therapy are available from:

➤ American Physical Therapy Association, 1111 North Fairfax St., Alexandria, VA 22314-1488. Internet: <http://www.apta.org>

**Physician Assistants**

(O\*NET 29-1071.00)

**Significant Points**

- The typical physician assistant program lasts about 2 years and usually requires at least 2 years of college and some healthcare experience for admission.
- Earnings are high and job opportunities should be good.

**Nature of the Work**

Physician assistants (PAs) provide healthcare services under the supervision of physicians. They should not be confused with medical assistants, who perform routine clinical and clerical tasks. (Medical assistants are discussed elsewhere in the *Handbook*.) PAs are formally trained to provide diagnostic, therapeutic, and preventive healthcare services, as delegated by a physician. Working as members of the healthcare team, they take medical histories, examine and treat patients, order and interpret laboratory tests and x rays, make diagnoses, and prescribe medications. They also treat minor injuries by suturing, splinting, and casting. PAs record progress notes, instruct and counsel patients, and order or carry out therapy. In 47 States and the District of Columbia, physician assistants may prescribe medications. PAs also may have managerial duties. Some order medical and laboratory supplies and equipment and may supervise technicians and assistants.

Physician assistants work under the supervision of a physician. However, PAs may be the principal care providers in rural or inner city clinics, where a physician is present for only 1 or 2 days each week. In such cases, the PA confers with the supervising physician and other medical professionals as needed or as required by law. PAs also may make house calls or go to hospitals and nursing homes to check on patients and report back to the physician.



*Physician assistants treat all types of patients, young and old.*